

INDEX

RUBBER CHEMISTRY AND TECHNOLOGY VOLUME XXI, 1948

AUTHOR INDEX

	Page
ALBERT, H. E., SMITH, G. E. P., JR., AND GOTTSCHALK, G. W. Effect of iron on aging of GR-S.....	877
ALTMAN, R. F. A. Chemical changes in ammonia-treated Hevea latex.....	241
Natural antioxidants in Hevea latex.....	752
Natural vulcanization accelerators in Hevea latex.....	853
AMERONGEN, VAN, G. J. <i>See</i> SALOMON, G.	
BARRER, R. M. Solubility of gases in elastomers.....	133
BEKKEDAH, NORMAN, QUINN, FRED A., AND ZIMMERMAN, ELMER W. Vulcanization of synthetic rubbers by the Peachey process.....	701
BELLAMY, J. L., LAWRIE, J. H., AND PRESS, E. W. S. Chromatographic analysis of rubber compounding ingredients and their identification in vulcanizates.....	734
BIGGS, B. S., ERICKSON, R. H., AND FULLER, C. S. Rubberlike products from linear polyesters.....	115
BLOKH, G. H., AND ZAIONCHKOVSKI, A. D. Roentgenographic and dielectric investigation of thermovulcanizates.....	543
BLOOMFIELD, G. F. Reaction of sulfur and sulfur compounds with olefinic substances. V. Rubber vulcanization.....	735
Chromatographic analysis.....	
BONNAR, ROBERT U. <i>See</i> MORRIS, ROSS E.	
BOXER, H. <i>See</i> JUVE, A. E.	
BOYLE, J. J. <i>See</i> STIEF, J. L. JR.	
BRASS, P. D., AND SLOVIN, D. G. Latex strainability test.....	765
BROOKS, M. C. <i>See</i> JUVE, A. E.	
BUIST, J. M., AND DAVIES, O. L. Methods of averaging physical test results. Use of median.....	188
CASHION, C. G. <i>See</i> JUVE, A. E.	
CHEVYCHALOVA, K. <i>See</i> KLEBANSKI, A.	
CHITTENDEN, F. D., McCLEARLY, C. D., AND SMITH, High solids synthetic latex directly from the reactor.....	889
COHAN, LEONARD H. Mechanism of reinforcement of elastomers by pigments.....	60
COMPAGNON, PATRICE, AND DELALANDE, ANDRÉ. Action of benzoyl peroxide on natural rubber in solution.....	41
CUNNEEN, J. I. Addition of thioc compounds to olefins. I. Reactions of thioglycolic acid, thiophenols, and isopentanethiol. II. Reactions of thioacetic and mono-, di-, and trichlorothiolic acids.....	471
DAVIES, O. L. <i>See</i> BUIST, J. M.	
DELALANDE, ANDRÉ. Combined action of maleic-N-methylmaleimide and p-bromo-benzoyl peroxide on natural rubber. <i>See</i> COMPAGNON, PATRICE.	344
DALFSEN, VAN, J. W. <i>See</i> HOMANS, L. N. S.	
DAVIES, P. L. <i>See</i> BUIST, J. M.	
DEANIN, RUDOLF. <i>See</i> MARVEL, C. S.	
DOCK, E. H., AND SCOTT, J. R. Hardness testing of vulcanized rubber. V. Investigation of the ball indentation test. Part 3. Condition of the rubber surface.....	262
DOGADKIN, B. Structural changes in rubbers brought about by molecular oxygen.....	48
DONER, S. R. <i>See</i> JUVE, A. E.	
DRISKELL, J. C., AND KRACKE, R. D. Mooney viscosity and gel plasticity relationship for GR-S-xylene gels.....	801
ERICKSON, R. H. <i>See</i> BIGGS, B. S.	
ESLER, G. <i>See</i> MARVEL, C. S.	
FARMER, E. H. Certain fundamental concepts relating to nonpolar mechanisms in olefinic systems.....	27
FIELDING, J. H. <i>See</i> JUVE, A. E.	
FLORY, PAUL J. Effects of cross-linking and branching on the molecular constitution of diene polymers.....	461
FRANCE, WESLEY G. <i>See</i> HULL, C. M.	
FULLER, C. S. <i>See</i> BIGGS, B. S.	
GEE, GEOFFREY. Equilibrium properties of high polymer solutions and gels.....	366
Tensile strengths of pure-gum natural rubber compounds.....	301
Thermodynamic properties of high polymers, and their molecular interpretation.....	564
GEHMAN, S. D., WOODFORD, D. E., AND WILKINSON, C. S., JR. Low-temperature characteristics of elastomers.....	94
GILS, VAN, G. E. Spontaneous coagulation of Hevea latex.....	539
GOFF, M. M. <i>See</i> JUVE, A. E.; MARVEL, C. S.	
GOPPEL, J. M. Degree of crystallinity in natural rubber. I. Improved method to determine the degree of crystallization in rubber.....	773
II. Orientation of rubber crystallites in stretched samples.....	783
GOTTSCHALK, G. W. <i>See</i> ALBERT, H. E.	
GRAVES, F. L. <i>See</i> JUVE, A. E.	
GREGORY, JOHN B. Effect of storage and temperature on flexibility of natural and synthetic rubbers.....	864
HAEFELE, J. W. <i>See</i> MCCOLM, E. M.	
HALVERSON, G. <i>See</i> HANSON, E. E.	
HANSON, E. E., AND HALVERSON, G. x-Ray diffraction study of some synthetic rubbers at low temperatures.....	627
HART, E. J., AND MATHESON, M. S. Quantum yield of oxidation of Hevea rubber and GR-S.....	639
HAY, D. C. <i>See</i> JUVE, A. E.	
HELLER, WILFRIED, AND OPPENHEIMER, HANS. Comparative studies on photoelasticity of elastomers and plastoelastomers....	790
HILDENBRAND, RENÉ. Study of the deactivating effect.....	684
HOMANS, L. N. S., AND DALFSEN, J. W. VAN Complexity of fresh Hevea latex.....	749

	Page	Page
HOWLETT, R. M. <i>See</i> JUVE, A. E.		
HULL, C. M., WEINLAND, LOUIS A., OLSEN, S. R., AND FRANCE, WESLEY G. Sulfur bond in vulcanizates. Vulcanization by di-thiols.....	553	426
D'IANNI, JAMES D. Physical properties of diene polymers.....	506	112
INSKEEP, G. ESLER. <i>See</i> MARVEL, C. S.		
JARRIION, ANDRÉ, AND LOUIA, PIERRE. Thermoplasticity of thermoprene. A study of the adhesion of rubber to metal.....	247	398
JOHNSON, B. L. Effect of molecular-weight distribution on physical properties of natural and synthetic polymers.....	654	860
<i>See</i> SAFFER, ALFRED.		
JUVE, A. E. Crack growth in GR-S tread stocks. Relation to state of cure and composition.....	484	257
<i>See</i> MARVEL, C. S.; SHEARER, R. J., GOFF, M. M., SCHROEDER, C. H., MEYER, A. W., AND BROOKS, M. C. Evaluation of sodium-catalyzed copolymers of 1,3-butadiene and styrene.....	452	516
FIELDING, J. H., AND GRAVES, F. L. Correlation of laboratory and service abrasion tests of rubber tire treads.....	523	281
AND HAY, D. C. Brabender plastograph in the rubber laboratory.....	531	
BOXBERG, H., REAHARD, D. F., JR., DONER, S. R., MCWHORTER, J. F., CASHION, C. G., McCARTHY, G. D., AND HOWLETT, R. M. The effect of air circulation by convection in the test-tube method of high-temperature aging of synthetic rubbers.....	271	226
AND GRAVES, F. L. Correlation of laboratory and service abrasion tests of rubber tire treads.....	950	
KASATOCHKIN, V. I. <i>See</i> LUKIN, B. V.		
KEMP, A. R. <i>See</i> SELKER, MILTON L.		
KILBOURNE, F. L. JR. Testing reclaimed rubber.....	766	
KINELL, PER-OLOF. <i>See</i> SVEDBERG, INGRID.		
KLEBANSKII, A., AND CHEVYCHALOVA, K. Structure of chloroprene polymers as determined by ozonolysis. XI.....	830	254
KOLTHOFF, I. M. <i>See</i> LEE, T. S.		
KONINGSBERGER, C. <i>See</i> SALOMON, G.		
KOBECO, P. P., AND MOSKVINA, E. K. Determination of unsaturation in butadiene synthetic rubber.....	605	149
KRACKE, R. D. <i>See</i> DRISKELL, J. C.		
LANDLER, IVAN. Chromatographic fractionation of some synthetic elastomers....	682	
LAWRIE, J. H. <i>See</i> BELLAMY, L. J.		
LE BEAU, D. S. Basic reactions occurring during rubber reclaiming. I. Influence of reclaiming media, antioxidant, and defibering agents on vulcanized natural rubber at 195 pounds-per-square inch gauge pressure (196.6°C). Quantitative estimation of GR-S in rubber reclaim.....	895	168
LEE, T. S., KOLTHOFF, I. M., AND MAIRS, ANNE. Determination of unsaturation of synthetic and natural rubbers by means of iodine chloride.....	909	82
LOUIA, PIERRE. <i>See</i> JARRIION, ANDRÉ.		
LUKIN, B. V., AND KASATOCHKIN, V. I. x-Ray investigation of the crystallization of vulcanized rubber on stretching.....	835	814
McCarthy, G. D. <i>See</i> JUVE, A. E.		
McCleary, C. C. <i>See</i> CHITTENDEN, F. D.		
McColl, E. M., AND HAFFELE, J. W. Variability of crude rubber. Effect of latex nonrubber substances on vulcanization and aging characteristics of crude rubber.....	736	805
McWHORTER, J. F. <i>See</i> JUVE, A. E.		
MAIRS, ANNE. <i>See</i> LEE, T. S.		
MARVEL, C. S., INSKEEP, G. ESLER, DEANIN, RUDOLF, JUVE, A. E., SCHROEDER, C. H., AND GOFF, M. M. Copolymers of butadiene with halogenated styrenes.....	621	918
MATHESON, M. S. <i>See</i> HART, E. J.		
MAYER, ANDRÉ. Variation in the specific heat of rubber as a function of elongation.....	452	926
MESROBIAN, ROBERT B., AND TOBOLSKY, ARTHUR V. Some structural and chemical aspects of aging and degradation of vinyl and diene polymers.....	452	928
MEYER, A. W. <i>See</i> JUVE, A. E.		
MOAKES, R. C. W., AND SODEN, A. L. Effect of prolonged storage of unvulcanized stock on the properties of the vulcanizate.....	654	936
MORLEY, J. F., AND SCOTT, J. R. Determination of resistance to abrasive wear. VII. Uniformity of results obtained with the du Pont machine.....	452	941
MORRIS, ROSE E., AND BONNAR, ROBERT U. Precision of tests for tear resistance.....	452	945
MOSKVINA, E. K. <i>See</i> KOBECO, P. P.		
MULLINS, L. Effect of stretching on the properties of rubber.....	452	
MUSCH, J. H. <i>See</i> SHEARER, R.		
NEWTON, E. G., STEWART, W. D., AND WILLSON, E. A. Crude rubber preparation. Sheet production by continuous coagulation of Hevea latex.....	523	
OLSEN, S. R. <i>See</i> HULL, C. M.		
OPPENHEIMER, HANS. <i>See</i> HELLER, WILFRIED.		
PARRIS, R. W., AND SCOTT, J. R. Determination of resistance to abrasive wear. V. Influence of calender grain.....	452	945
PIPER, G. H., AND SCOTT, J. R. Plasticization of natural and synthetic rubbers. I. PIROT, MARCEL. Method of testing the mechanical properties of vulcanizates obtained from latex as a starting material.....	452	945
PRESS, E. W. S. <i>See</i> BELLAMY, L. J.		
QUINN, FRED A. <i>See</i> BEKKEDAH, NORMAN.		
REHNER, JOHN, JR. Heat conduction and molecular structure in rubberlike polymers. REAHARD, D. F. JR. <i>See</i> JUVE, A. E.	682	945
SAFFER, ALFRED, AND JOHNSON, B. L. Measurement of internal double bonds in polymers by perbenzoic acid addition.....	621	945
SALOMON, G. Influence of structure on polymer-liquid interaction. II. Influence of nitrile groups.....	621	945
Preparation and properties of rubberlike polymers. V. Influence of nitrile groups on properties of copolymers.....	621	945
— AND AMERONGEN, G. J. VAN. Influence of structure on polymer-liquid interaction. I. Relative and absolute values of swelling equilibria.....	621	945
— AND KONINGSBERGER, G. Preparation and properties of rubberlike high polymers. IV. Correlation between structure and properties of elastomers derived from dienes.....	621	945
SCHROEDER, C. H. <i>See</i> JUVE, A. E.; MARVEL, C. S.		
SCOTT, J. R. Hardness testing of vulcanized rubber. VII. Influence of thickness of rubber. Tests with various indentors.....	621	945
VIII. Hardness tests with a conical indenter.....	621	945
IX. Influence of thickness of rubber in hardness testing.....	621	945
X. Choice of size and form of ball indenter. XI. Influence of gauge-spring pressure and friction in the indentation hardness test. XII. Comparison of tests using a 4-inch ball and a $\frac{1}{2}$ -inch ball.....	621	945

SUBJECT INDEX

953

	Page		Page
<i>See</i> DOCK, E. H.; MORLEY, J. F.; PARRIS, R. W.; PIPER, G. H.		TRELOAR, L. R. G. Photoelastic properties of rubber. I. Theory of the optical properties of strained rubber.....	347
SELKER, MILTON L., AND KEMP, A. R. Sulfur linkage in vulcanized rubber. Reaction of sulfur with 2-methyl-2-butene.....	14	II. Double refraction and crystallization in stretched vulcanized rubber.....	355
SHEARER, R., JUVE, A. E., AND MUSCH, J. H. Measurement of the scorch and cure rate of vulcanizable mixtures, using the Mooney plastometer.....		THRODAHL, M. C. Device for evaluating surface cracking of GR-S.....	220
SHELTON, J. REID, AND WINN, HUGH. Oven and bomb aging of GR-S at corresponding temperatures.....	496	Statistical analysis of plasticity measurements of natural and synthetic rubber.....	164
SHEPPARD, N., AND SUTHERLAND, G. B. B. M. Infrared spectrum of vulcanized rubber and the chemical reaction between sulfur and rubber.....	180	TRILLAT, J. J. Radiographic study of rubber-sulfur mixtures.....	141
SLOVIN, D. G. <i>See</i> BRASS, P. D.		VAN AMERONGEN, G. J. <i>See</i> AMERONGEN, G. J. VAN.	
SMITH, G. E. P., JR. <i>See</i> ALBERT, H. E.; CHITTENDEN, F. D.; MOAKES, R. C. W.		VAN DALSEN, J. W. <i>See</i> DALSEN, J. W. VAN.	
SODEN, A. L. <i>See</i> MOAKES, R. C. W.		VAN DER WYK, A. J. A. <i>See</i> WYK, A. J. A. VAN DER.	
STEWART, W. D. <i>See</i> NEWTON, E. G.		VAN GILS, G. E. <i>See</i> GILS, G. E. VAN.	
STIEF, J. L. JR., AND BOYLE, J. J. Effect of fungicides on natural and synthetic rubber.		WAKELIN, JAMES H. <i>See</i> STIEHLER, ROBERT D.	
STIEHLER, ROBERT D., AND WAKELIN, JAMES H. Mechanism and theory of vulcanization.....	276	WEINLAND, LOUIS A. <i>See</i> HULL, C. M.	
SUTHERLAND, G. B. B. M. <i>See</i> SHEPPARD, N.		WILKINSON, C. S. JR. <i>See</i> GEHMAN, S. D.	
SVEBERG, INGRID, AND KINELL, PER-OLOF. Properties of polychloroprene molecules in solution.....	325	WILLIAMS, IRA. Vulcanization of rubber with sulfur.....	
THIRION, PIERRE. Coefficients of adhesion of rubber.....	505	WILLSON, E. A. <i>See</i> NEWTON, E. G.	
TOBOLSKY, ARTHUR V. <i>See</i> MESROBAN, ROBERT B.		WINN, HUGH. <i>See</i> SHELTON, J. REID.	
		WOODFORD, D. E. <i>See</i> GEHMAN, S. D.	
		WYK, A. J. A. VAN DER. <i>See</i> MEYER, KURT, H.	
ZIMMERMAN, ELMER W. <i>See</i> BEKKEDAH, NORMAN.		ZIAONCHKOVSKI, A. D. <i>See</i> BLOKH, G. A.	

SUBJECT INDEX

Abrasion tests of tire treads.....	523,	950	Chemical changes in ammoniated Hevea latex	241
Abrasive wear, determination of resistance to	254,	257	Chloroprene polymers, structure of.....	605
Accelerators, natural, in Hevea latex.....	853		Chromatographic analysis.....	735
Action of benzoyl peroxide on natural rubber in solution.....	60		analysis of rubber compounding ingredients and their identification in vulcanizates	734
Addition of thio compounds to olefins. I. Reactions of thioglycolic acid, thiophenols, and isopentanethiol.....	41		fractionation of some synthetic elastomers	682
II. Reactions of thioclaetic and mono-, di-, and trichlorothioclaetic acids.....	471		Coagulation of Hevea latex.....	226,
Adhesion of rubber, coefficients of	505		539	
Aging of crude rubber.....	736		Coefficients of adhesion of rubber.....	505
of GR-S.....	180,		Combined action of maleic N-methylmaleimide and p-bromobenzoyl peroxide on natural rubber.....	344
of synthetic rubbers.....	877		Comparative studies on photoelasticity of elastomers and plasters.....	790
of vinyl and diene polymers.....	271		Complexity of fresh Hevea latex.....	749
of vulcanizates.....	398		Compounding ingredients chromatographic analysis of in vulcanizates.....	195
Air circulation, effect of, in aging synthetic rubbers.....	711		734	
Analysis, chromatographic.....	271		Constitution of diene polymers.....	461
Antioxidant, influence of.....	735		Copolymers	
Antioxidants, natural, in Hevea latex.....	895		of butadiene with halogenated styrenes.....	426
Ammoniated Hevea latex.....	752		sodium catalyzed, of 1,3-butadiene and styrene.....	452
Ball indentation test.....	241		Correlation of laboratory and service abrasion tests of rubber tire treads.....	523,
indentor, form of.....			950	
Basic reactions occurring during rubber reclaiming. I. Influence of reclaiming media, antioxidant, and defibering agents on vulcanized natural rubber at 195 pounds per square inch gauge pressure (196.6° C.)			Crack growth in GR-S tread stocks. Relation to state of cure and composition.....	484
Benzoyl peroxide, action on natural rubber.....	60		Cracking, surface, of GR-S.....	220
Bomb and oven aging of GR-S.....	180		Cross-linking effects of diene polymers on molecular constitution.....	461
Bonds, internal double, in polymers.....			Crude rubber preparation. Sheet production by continuous coagulation of Hevea latex.....	226
Brabender plastograph in the rubber laboratory.....			variability of.....	736
p-Bromobenzoyl peroxide, action on natural rubber.....	821		Crystallinity in natural rubber.....	773
Butadiene copolymers of.....	531		Crystallites, rubber, in stretched samples.....	873
Synthetic rubber.....	426		Crystallization	
1,3-Butadiene and styrene, copolymers of.....	830		in rubber.....	773
Calender grain.....	452		in stretched vulcanized rubber.....	355
Certain fundamental concepts relating to non-polar mechanisms in olefinic systems.....	254		of vulcanized rubber on stretching, x-ray study of.....	621
			Cure and composition of GR-S tread stocks.....	484
			rate, measurement of.....	496
			Deactivating effect, study of.....	684

Page	Page		
Degree of crystallinity in natural rubber. I. Improved method to determine the degree of crystallization in rubber.....	773	X. Choice of size and form of ball indentor XI. Influence of gauge-spring pressure and friction in the indentation hardness test.....	936 941
II. Orientation of rubber crystallites in stretched samples.....	783	XII. Comparison of tests using a 1-inch ball and a $\frac{1}{2}$ -inch ball.....	945
Defibering, influence of, on natural rubber.....	895	tests.....	926
Determination of resistance to abrasive wear. V. Influence of calender grain.....	254	Heat conduction and molecular structure in rubberlike polymers.....	82
VII. Uniformity of results obtained with the du Pont machine.....	257	High-solids synthetic latex directly from the reactor.....	889
Determination of unsaturation in butadiene synthetic rubber.....	830	Hgroskopie properties of vulcanizates.....	711
of synthetic and natural rubbers by means of iodine chloride.....	835	Identification of rubber compounding ingredients.....	195, 734
Device for evaluating surface cracking of GR-S.....	220	in vulcanizates.....	195, 734
di-, mono- and trichlorothiolic acids.....	471	Indentation hardness test test, ball.....	262, 936
Dielectric investigation of thermovulcanizates	727	Indentor, ball, size and form of conical.....	928 926
Diene polymers, molecular constitution of. physical properties of.....	461	Indentors, tests with various.....	918
and vinyl polymers.....	596	Influence of structure on polymer-liquid interaction. I. Relative and absolute values of swelling equilibria.....	66
Dithiols, vulcanization by.....	553	II. Influence of nitrile groups.....	805
Double bonds, internal, in polymers.....	821	Infrared spectrum of vulcanized rubber and the chemical reaction between sulfur and rubber.....	799
du Pont machine, results with.....	257	Internal double bonds in polymers.....	821
Effect of air circulation by convection in the test-tube method of high-temperature aging of synthetic rubbers.....	271	Iodine chloride, unsaturation of synthetic and natural rubbers by.....	835
of cross-linking and branching on the molecular constitution of diene polymers of fungicides on natural and synthetic rubber.....	461	Iron, effect of, on aging of GR-S.....	877
of iron on aging of GR-S.....	877	Isopentanethiol, reactions of.....	41
of molecular-weight distribution on physical properties of natural and synthetic polymers.....	596	Latex Hevea ammoniated.....	241
of prolonged storage of unvulcanized stock on the properties of the vulcanizate.....	600	coagulation of.....	246, 539
of storage and temperature on flexibility of natural and synthetic rubbers.....	644	complexity of fresh.....	749
of stretching on the properties of rubber.....	711	natural antioxidants in.....	752
Electrical properties of vulcanizates.....	112	high solids synthetic.....	889
Elongation, specific heat of rubber, as function of.....	366	nonrubber substances in.....	736
Equilibrium properties of high polymer solutions and gels.....	909	strainability test.....	765
Estimation of GR-S in rubber reclaim.....	452	vulcanizates from.....	168
Evaluation of sodium-catalyzed copolymers of 1,3-butadiene and styrene.....	864	Low temperature characteristics of elastomers	94
Flexibility, effect of, on storage.....	941	Maleic N-methylmaleimide, action of, on natural rubber.....	344
Friction, influence of, in indentation hardness test.....	276	Measurement of internal double bonds in polymers by perbenzoic acid addition.....	821
Fungicides, effect on natural and synthetic rubber.....	133	of the scorch and cure rate of vulcanizable mixtures using the Mooney plastometer.....	496
Gases, solubility of, in elastomers.....	801	Mechanical properties of vulcanizates.....	168, 711
Gel plasticity for GR-S-xylene gels.....	366	Mechanism of reinforcement of elastomers by pigments and theory of vulcanization.....	667
Gels, high polymer solutions and GR-S xylene.....	801	Metall, adhesion of, rubber to.....	325
GR-S, effect of iron on aging of.....	877	Method of testing the mechanical properties of vulcanizates obtained from latex as a starting material.....	247
estimation of, in reclaim.....	909	Methods of averaging physical test results. Use of median.....	168
oven and bomb aging of.....	180	2-Methyl-2-butene, reaction of sulfur with.....	188
oxidation of.....	639	Molecular-weight distribution, effect of, on physical properties of polymers.....	14
surface cracking of.....	220	Mono-, di- and trichlorothiolic acids.....	654
tread stocks, crack growth in.....	484	Mooney plastometer.....	471
xylene gels.....	801	viscosity and gel plasticity relationship for GR-S xylene gels.....	496
Halogenated styrenes.....	426	Natural antioxidants in Hevea latex.....	801
Hardness indentation test.....	262, 936	Natural vulcanization accelerators in Hevea latex.....	752
testing.....	918-945	Nitrile groups, influence of.....	853
testing of vulcanized rubber. V. Investigation of the ball indentation test. Part 3. Condition of the rubber surface.....	262	Nonpolar mechanisms in olefinic systems.....	805, 814
VII. Influence of thickness of rubber. Tests with various indentors.....	918	Olefinic substances, sulfur with.....	27
VIII. Hardness tests with a conical indentor.....	926	systems, nonpolar mechanisms in.....	543
IX. Influence of thickness of rubber in hardness testing.....	928	Olefins, addition of thio compounds to.....	41, 471
		Optical properties of strained rubber.....	347
		Orientation of rubber crystallites.....	783

SUBJECT INDEX

955

Page	Page		
Oven and bomb aging of GR-S at corresponding temperatures.....	180	Spontaneous coagulation of Hevea latex.....	539
Oxidation of Hevea rubber and GR-S.....	639	Statistical analysis of plasticity measurements of natural and synthetic rubber.....	164
Oxygen, molecular, structural changes in rubbers by.....	48	Storage, effect of, on flexibility of rubbers.....	864
Ozonolysis, determination of structure of chloroprene polymers by.....	605	prolonged, of unvulcanized stock.....	860
Peachey process, vulcanization of synthetic rubbers by.....	701	Strainability test, latex.....	765
Perbenzoic acid addition to polymers.....	821	Strained rubber, optical properties of.....	347
Photoelastic properties of rubber. I. Theory of the optical properties of strained rubber.....	347	Stretched samples, crystallites in.....	783
II. Double refraction and crystallization in stretched vulcanized rubber.....	355	Stretched vulcanized rubber.....	355
Photoelasticity of elastomers and plastoelastomers.....	359	Stretching, effect of, on properties of rubber.....	281
Physical properties of diene polymers.....	596	of vulcanized rubber, <i>x</i> -ray investigation of.....	621
Physical test results.....	188	Structural aspects of vinyl and diene polymers.....	398
Pigments, reinforcement of elastomers by.....	667	changes in rubbers brought about by molecular oxygen.....	48
Plasticity measurements, statistical analysis of.....	164	Structure, influence of, on polymer-liquid interaction.....	66, 805
Plasticization of natural and synthetic rubbers. I.....	149	molecular, and heat conduction in rubber-like polymers.....	82
Plastograph, Brabender.....	531	of chloroprene polymers as determined by ozonolysis. XI.....	605
Plastometer, Mooney.....	496	and properties of elastomers.....	377
Polychloroprene molecules in solutions.....	436	Study of the deactivating effect.....	684
Polyesters, linear rubberlike products from.....	115	Styrene and 1,3-butadiene copolymers.....	452
Polymers, chloroprene, structure of.....	605	Styrenes, halogenated.....	426
diene.....	596	Sulfur, bond in vulcanizates. Vulcanization by di thiols.....	553
high, thermodynamic properties of.....	564	linkage in vulcanized rubber. Reaction of sulfur with 2-methyl-2-butene.....	14
natural and synthetic.....	654	reaction with olefinic substances.....	543
Precision of tests for tear resistance.....	516	and rubber, chemical reaction between.....	799
Preparation and properties of rubberlike high polymers. IV. Correlation between structure and properties of elastomers derived from dienes.....	377	vulcanization of rubber with.....	1
V. Influence of nitrile groups on properties of copolymers.....	814	Surface cracking of GR-S.....	220
Properties of polychloroprene molecules in solution.....	436	Synthetic elastomers, chromatographic fractionation of.....	682
Properties of rubberlike polymers.....	377	rubber, aging of.....	271
Pure-gum natural rubber compounds.....	814	butadiene unsaturation of.....	830
Purified natural rubbers. Mechanical, aging, hygroscopic, and electrical properties of the vulcanizates.....	301	effect of fungicides on.....	276
Quantitative estimation of GR-S in rubber reclaim.....	909	flexibility of.....	864
Quantum yield of oxidation of Hevea rubber and GR-S.....	639	storage of.....	627
Radiographic study of rubber-sulfur mixtures.....	141	vulcanization of.....	1, 701
Reaction of sulfur and sulfur compounds with olefinic substances. V. Rubber vulcanization.....	543	<i>x</i> -ray study of.....	627
Reclaim, GR-S in.....	909	Swelling equilibria.....	66
Reclaimed rubber, testing.....	766		
Reclaiming, basic reactions during.....	895	Tear resistance, precision tests for.....	516
Reinforcement, mechanism of, of elastomers.....	667	Temperatures, low, <i>x</i> -ray diffraction study of synthetic rubbers at.....	627
Refraction, double, in stretched vulcanized rubber.....	355	Tensile strengths of pure-gum natural rubber compounds.....	301
Resistance, tear, precision tests for.....	516	Testing reclaimed rubber.....	766
Roentgenographic and dielectric investigation of thermovulcanizates.....	727	Tests hardness with ball.....	945
Rubberlike polymers.....	82, 377,	Test-tube method of high temperature aging of synthetic rubbers.....	271
products from linear polyesters.....	814	Theory of vulcanization.....	325
Rubber-sulfur mixtures, radiographic study of.....	141	Thermodynamic properties of high polymers, and their molecular interpretation.....	564
Scorch rate, measurement of.....	496	Thermoplasticity of thermoprene. A study of the adhesion of rubber to metal.....	247
Sodium-catalyzed copolymers of 1,3-butadiene and styrene.....	452	Thermoprene, thermoplasticity of.....	247
Solubility of gases in elastomers.....	133	Thermovulcanizates, investigation of.....	727
Solution, polychloroprene molecules in.....	436	Thickness of rubber in hardness testing.....	928
Solutions, high polymer, and gels.....	366	Thio compounds, addition of, to olefins.....	41, 471
Some structural and chemical aspects of aging and degradation of vinyl and diene polymers.....	398	Thioglycolic acid, reactions of.....	41
Specific heat of rubber.....	112	Thiolacetic acid, reactions of.....	471
Spectrum, infrared, of vulcanized rubber.....	799	Thiophenols, reactions of.....	41
Variability of crude rubber. Effect of latex nonrubber substances on vulcanization and aging characteristics of crude rubber.....		Tire treads, abrasion tests.....	523, 950
Variation in the specific heat of rubber as a function of elongation.....		Tread stocks, GR-S crack-growth in.....	484
		Trichlorothiolic acid, reactions in.....	471
		Unsaturation in butadiene synthetic rubber.....	830
		of synthetic and natural rubbers.....	835
		Variability of crude rubber. Effect of latex nonrubber substances on vulcanization and aging characteristics of crude rubber.....	736
		Variation in the specific heat of rubber as a function of elongation.....	112

SUBJECT INDEX

Page		Page
398	Vinyl and diene polymers.....	1
801	Viscosity, Mooney, for GR-S-xylene gels.....	701
Vulcanization		
853	accelerators in Hevea latex.....	
736	of crude rubber.....	
553	by dithiols.....	
325	mechanism and theory of.....	
543	rubber.....	
x-Ray		
	of rubber with sulfur.....	627
	of synthetic rubbers by the Peachey process.....	
	diffraction study of some synthetic rubbers at low temperatures.....	627
	investigation of the crystallization of vul- canized rubber on stretching.....	621
	Xylene, GR-S, gels.....	801

Page
1
701

627
621
801